

# Appendix D: Additional LSPC Hydrology Validation Results

DRAFT

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*Prepared for:*  
USEPA Region 9  
Hawai'i Department of Health

*Prepared by:*  
Tetra Tech, Inc.  
1230 Columbia Street, Suite 520  
San Diego, California 92101

## Introduction

The graphs presented below in Sections D.1 and D.2 provide further validation of the hydrology parameters used in the LSPC modeling (see Appendix B for a detailed discussion of the modeling approach and results). Specifically, for the graphs in Section D.1, hourly model flow output was compared with discrete flow measurements at several sampling stations throughout the Hanalei Bay watershed, including two stations in both the Waipa and Waioli watersheds. This comparison is important because it tests parameter values calibrated and validated using continuous flow data at the USGS gage in the Hanalei River watershed in two additional watersheds draining to Hanalei Bay. In Section D.2, hourly model flow output was compared with sub-hourly flow at the USGS gage during two storm events to obtain a general idea about model fit during storm events. Additional details regarding the hydrology simulations and results are discussed in Appendix B.

## D-1. Hydrology Validation: Discrete Measurement Comparisons

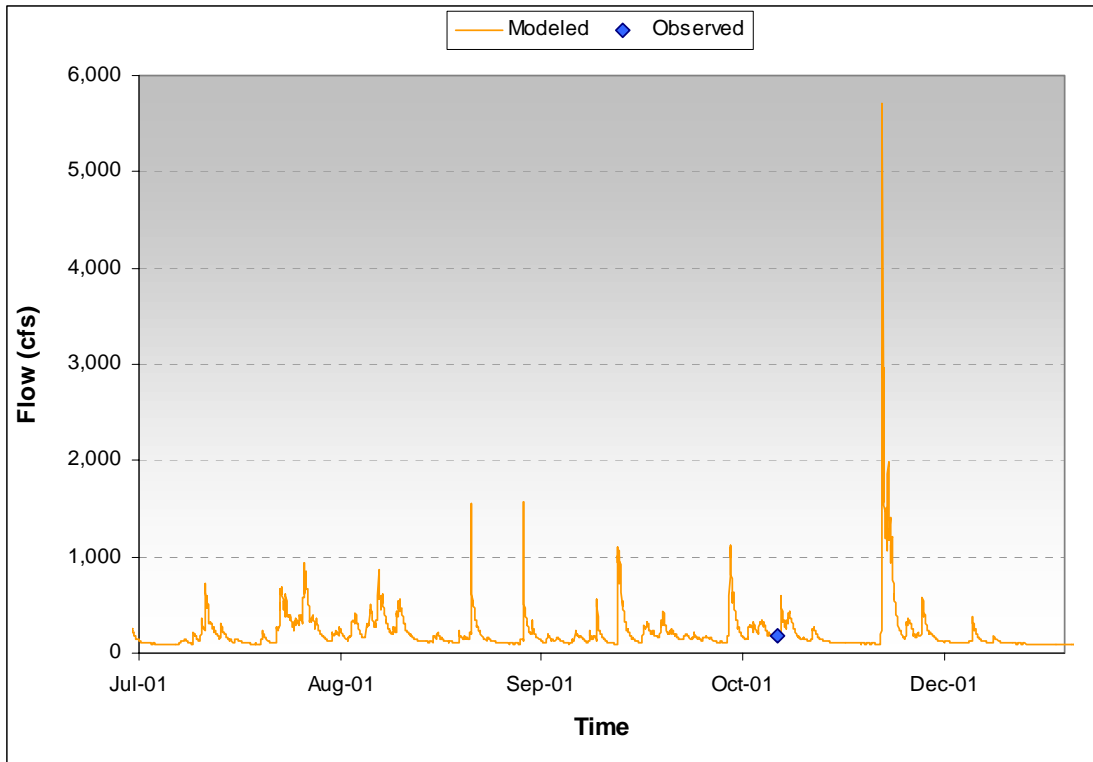


Figure D-1. Modeled and observed discrete flow measurements at subwatershed 112

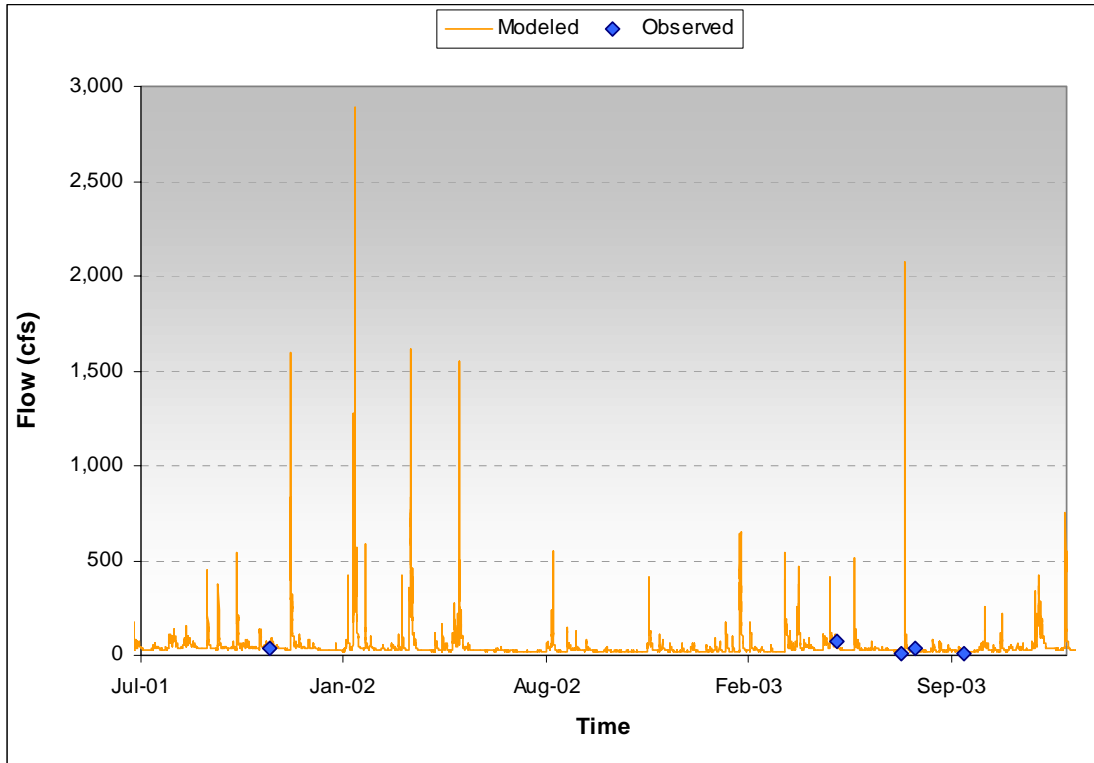


Figure D-2. Modeled and observed discrete flow measurements at subwatershed 201

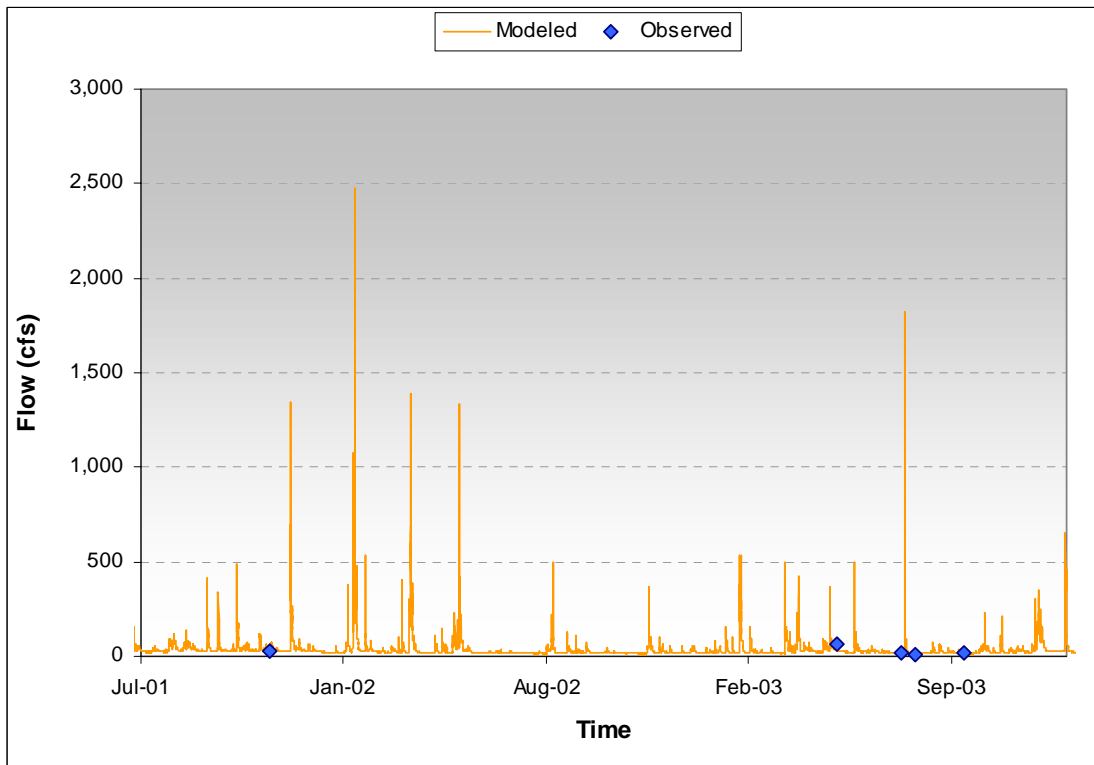


Figure D-3. Modeled and observed discrete flow measurements at subwatershed 202

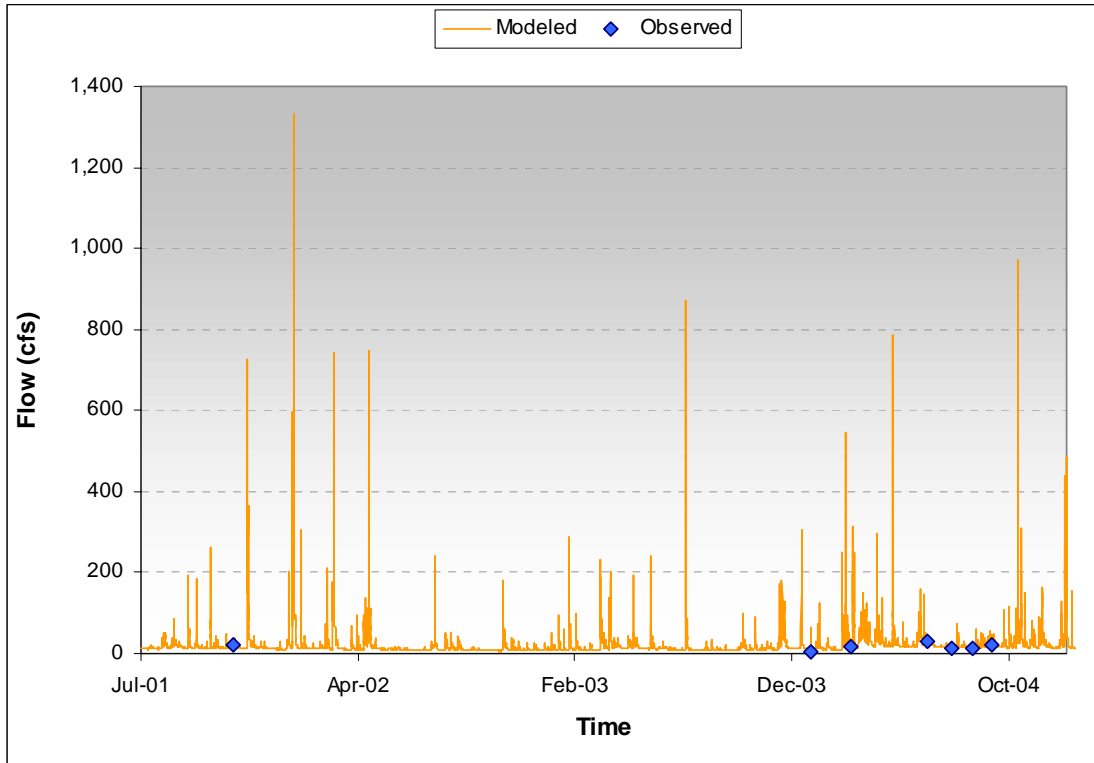


Figure D-4. Modeled and observed discrete flow measurements at subwatershed 303

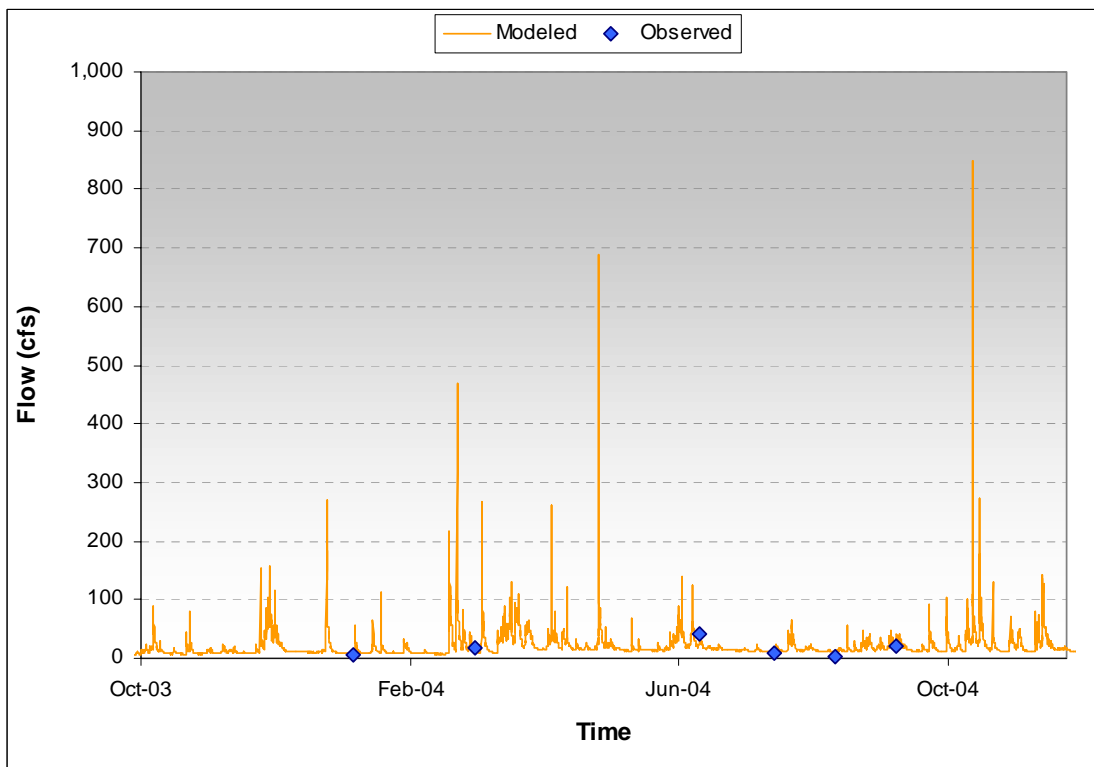


Figure D-5. Modeled and observed discrete flow measurements at subwatershed 304

## D-2. Hydrology Validation: Automatic Sampler Comparisons

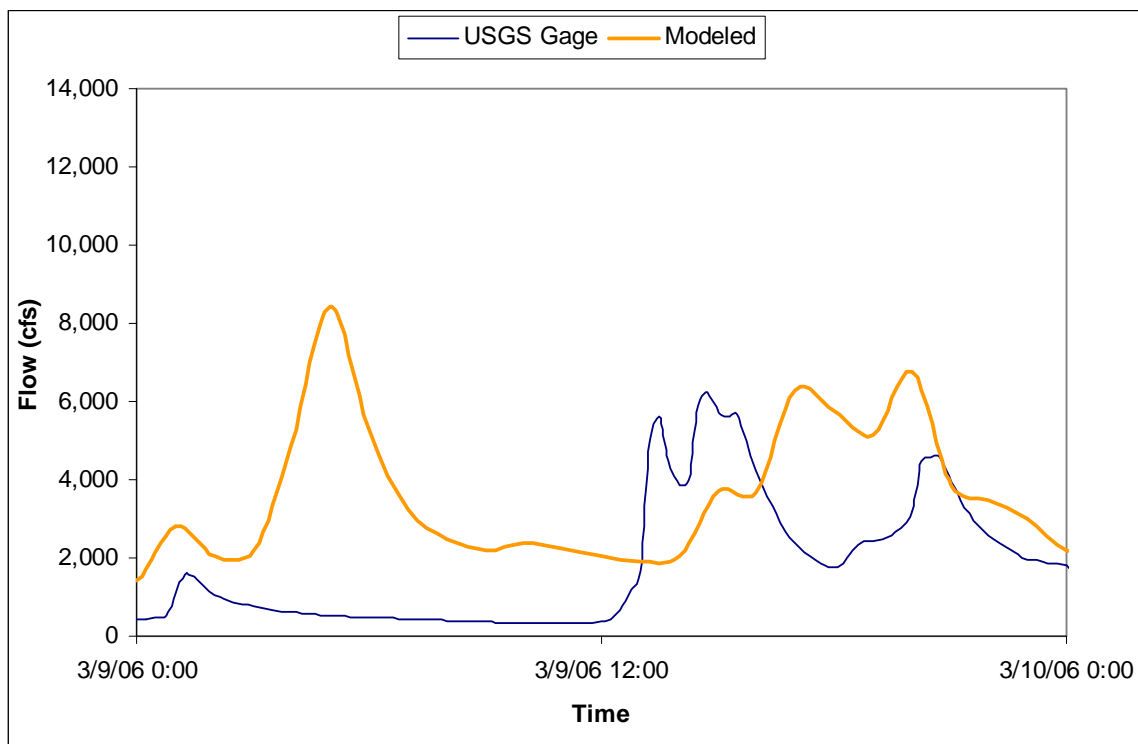


Figure D-6. Modeled flow at the automatic sampler location (subwatershed 110) and observed flow at the USGS gage (subwatershed 116) – March 9, 2006 storm

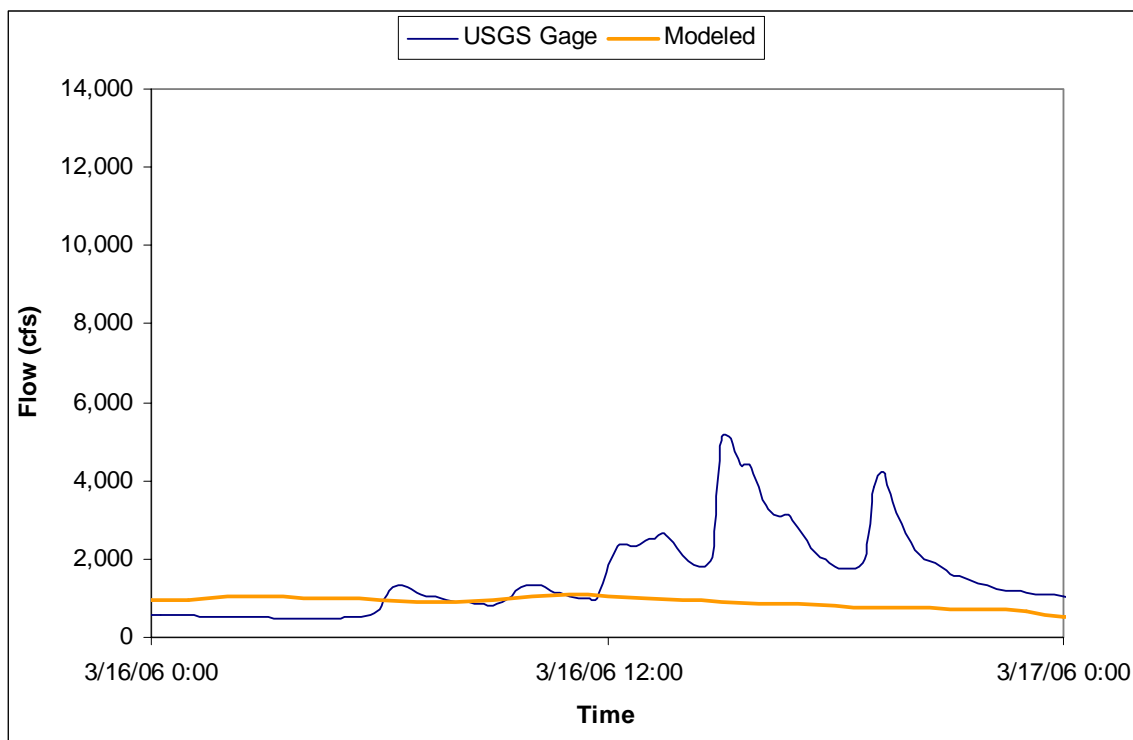


Figure D-7. Modeled flow at the automatic sampler location (subwatershed 110) and observed flow at the USGS gage (subwatershed 116) – March 16, 2006 storm

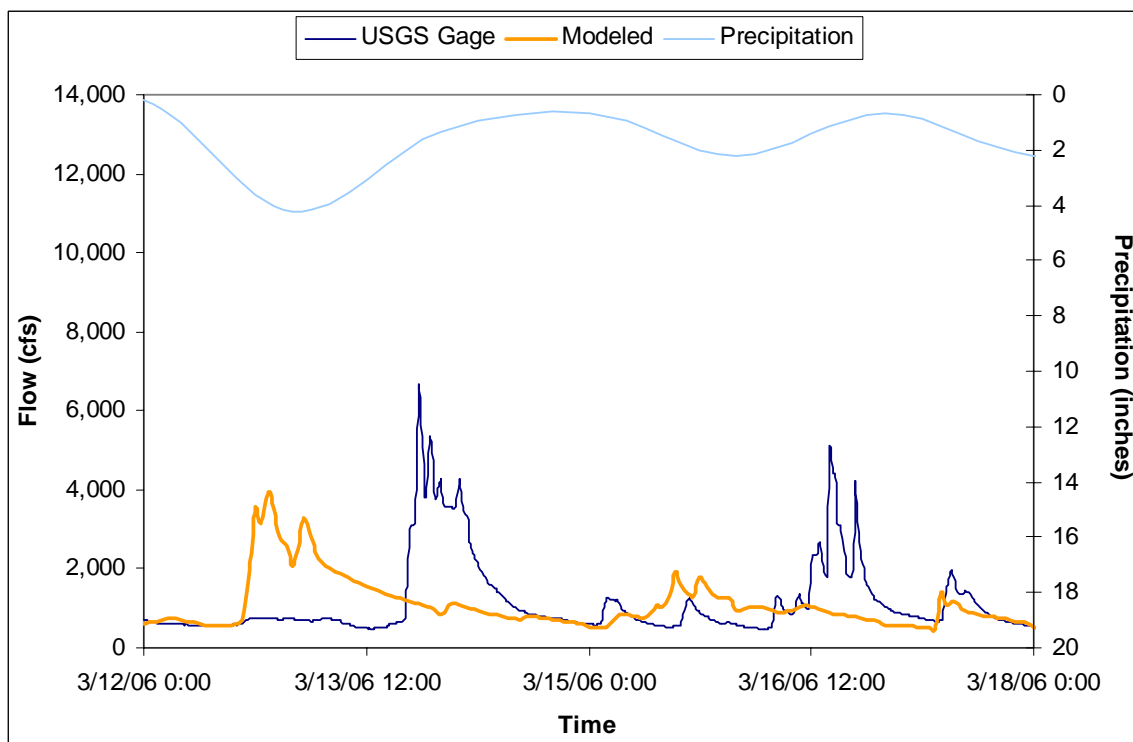


Figure D-8. Modeled flow at the automatic sampler location (subwatershed 110) and observed flow at the USGS gage (subwatershed 116) – week of March 16, 2006 storm